

## **ABSTRACT**

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*MTH Development Project 27 Office Suite. Methods of Implementation and Calculation of Strutting Requirements in Basement Zone A Layer 3 Work.*

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(xv + 92 + Attachments)

*The MTH 27 Office Suites project is located on Jl. Letjen. MT. Haryono Kav. 27, Ex. Cawang, Kec. Kramat Jati City, East Jakarta. The purpose of this project is to develop the construction service business industry growth, especially high-rise buildings. PT. Adhi Commuter Properti as the owner and construction management consultant in collaboration with PT. Bina Karya as the planning consultant and PT. Adhi Persada Gedung as the main contractor for this project. The project which was established on an area of  $\pm 3,989 \text{ m}^2$ , with a building area of  $\pm 27,570 \text{ m}^2$  consisting of 4 basement floors, Floor 1 to Floor 3 is a commercial area and floors 3 to 13 are used as offices. Construction of the building structure began on December 1, 2019 and is planned for completion on March 1, 2021 with a contract value of IDR 111,471,888,000. Practical work is carried out during basement work 4. Selection of retaining walls is one of the things that need to be considered in the construction of building structures. The deeper the basement of a building, the greater the shear force that occurs. This risk can be offset by using retaining walls assisted by strutting. Strutting in the form of steel rods functions to distribute the load evenly on the soil retaining wall and soil retaining wall to withstand soil pressure around the project so that it can be distributed to the soil properly. The method of implementation starts from preparation work, determination work and strutting points, steel fabrication work, steel erection and installation. Based on the results of the calculation, it takes 38,328.68 kg of steel with a steel waller beam volume of  $1.399 \text{ m}^3$ , a steel strut beam volume of  $3.108 \text{ m}^3$ , a steel tie beam volume of  $0.386 \text{ m}^3$ .*

**Keywords:** Strutting, Volume Calculation, Weight Calculation